A method and an apparatus for ultrasonic processing of workpieces (6) with a vibratory structure (1) comprising a sonotrode (3) and a converter (2). Energy is fed to the converter (2) by means of an ultrasonic generator (7), which is switched on and off by electrical switch-on and switch-off signals respectively, only for the duration of processing cycles. According to the invention the switch-off signals are generated on the basis of at least one state parameter (P) of the generator (7). (Fig. 1).

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